

Platelets, from sample to big data

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9.5 VALORIZATION

The valorization or knowledge exchange, as a result of this PhD research, is demonstrated on different levels. Although in general terms, valorization is required “to meet the needs of society”, this research resulted in actual and future interactions with specific stakeholders or users. Considering academical users, field experts and clinicians as a first target group, each chapter of this PhD research was published in scientific journals as mentioned in the publications section. As such the scientific output was monitored by several key metrics (e.g. Altmetric score, Web of Science citations) which enabled measurement of general interest positively affecting the communication strategies of the Maastricht University, the Maastricht UMC+/azM, the Ziekenhuis Oost-Limburg and Synapse BV.

Considering the valorization with respect to the relation of research and practice, this thesis aimed to improve existing habits and practices. The research findings stimulated our knowledge regarding the added value but also the limitations of different assays. Additionally, the general interest in thrombosis prevention in the post-surgical phase potentially increased in particular in future research associated with inflammation.

The research results also opened opportunities for new research projects in a different context, e.g. research of platelet function in (pre-)eclampsia directly profiting from the logistical experience of this research and because of the constructive relation we created with the Maastricht University, the Maastricht UMC+/azM and Synapse BV. Additionally, the expertise and knowledge we shared and built during this PhD trajectory was noticed by researchers from the Chinese Wenzhou Medical University, Institute of Hepatology resulting in a growing scientific output as mentioned in the publications section.

The collaboration with the laboratories for the purposes of development and testing of the assays enabled expansion and quality improvement of the quantitative assessment of hemostasis and thrombosis in our hospital. The combination of knowledge from various disciplines (e.g. oncologic surgery, central laboratory) improved the collaboration potentially affecting the care of critically ill patients and patients admitted for surgical interventions in particular for CABG and CRS/HIPEC.

As target populations subdivide along combinations of co-morbidities and countless genetic polymorphisms, as diagnostic and monitoring devices including become more ubiquitous, it is clear that the traditional approach to knowledge discovery cannot scale to match the exponential growth of medical complexity (Ghassemi 2015). Also this part in research was explored, thanks to the kind and constructive cooperation with the Beth Israel Deaconess Medical Center (Boston USA), the Laboratory for Computational Physiology at the Massachusetts Institute of Technology, the Faculty of Organizational Sciences at the University of Belgrade which opened new opportunities for future research in thrombosis and hemostasis research based on large medical databases (MIMIC-III).